

PATENT
Serial No. 10/014,359
Amendment in Reply to Office Action of August 10, 2005

IN THE CLAIMS

Please amend claims 1-7, and add claims 8-20 as follows:

1. (Currently Amended) A wireless network comprising a radio network controller and a plurality of ~~assigned terminals, which are~~
~~each provided for wherein at least one of said radio network~~
~~controller and one of said plurality of terminals is configured~~
for:

transmitting transport blocks formed by packet data units of a logic channel over a transport channel to which a transmission time interval is assigned that comprises at least one radio frame and which transport channel is active when the beginning of its transmission time interval and that of a radio frame correspond,

~~provided for forming at least a transport format~~
combination, which combinations denote the transport blocks to be transmitted over each transport channel,

~~successively provided forming a reduced number of transport~~
format combinations by selecting, for each logic channel, to select
a number of transport format combinations which permit the highest

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number or more than the highest number of available packet data units to be transmitted, while taking stored packet data units into account of already considered logic channels which are also mapped onto the same transport channel, and

~~provided for selecting from the reduced number of transport format combinations the transport format combination that contains the lowest number of transport blocks while the already assigned and does not include inactive transport channels are taken into account.~~

2. (Currently Amended) A wireless network as claimed in claim 1, characterized in that logic channels having different priorities are mapped onto exactly one transport channel and in that the radio network controller or a said one of said plurality of terminals is ~~provided configured~~ for making the selection of a number of transport format combinations in the order of priority of the logic channels.

3. (Currently Amended) A wireless network as claimed in claim 2, characterized in that the radio network controller or a said one

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of said plurality of terminals is provided~~configured~~ for performing a sorting of the logic channels at the beginning of the transmission according to the priorities of the logic channels and, with equal priority of the logic channels, according to the length of a transmission time interval used as the basis, whose duration corresponds at least to one radio frame, and at the beginning of each radio frame, the radio network controller or said one of said plurality of terminals is provided~~further configured~~ for making a sorting according to the number of blocks waiting in the buffers of the logic channels without considering the duration of the transmission time interval.

4. (Currently Amended) A wireless network as claimed in claim 1, characterized in that ~~the~~ a MAC layer (MAC = Medium Access Control) of ~~a~~ the radio network controller or of ~~a~~ said one of said plurality of terminals is ~~provided~~ configured for selecting a transport format combination.

5. (Currently Amended) A wireless network as claimed in claim 4, characterized in that an RLC layer (RLC = Radio Link Control) of

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the radio network controller or of a said one of said plurality of
terminal is ~~provided~~ configured for storing packet data units
provided for transmission and the MAC layer is ~~provided~~ configured
for forming a transport block from a packet data unit delivered
over a logic channel.

6. (Currently Amended) A radio network controller of a
wireless network comprising a plurality of ~~assigned terminals~~, in
~~which~~ wherein the radio network controller is configured for:
~~is provided for~~ transmitting transport blocks formed by
packet data units of a logic channel over a transport channel to
which a transmission time interval is assigned that comprises at
least one radio frame and which transport channel is active when
the beginning of its transmission time interval and that of a radio
frame correspond,

~~is provided for~~ forming at least a transport format
combination, which combinations denote the transport blocks to be
transmitted over each transport channel,

~~is successively provided~~ forming a reduced number of
transport format combinations by selecting, for each logic channel,

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~~to select a number of transport format combinations which permit the highest number or more than the highest number of available packet data units to be transmitted, while taking stored packet data units into account of already considered logic channels which are also mapped onto the same transport channel, and~~
~~is provided for selecting from the reduced number of transport format combinations the transport format combination that contains the lowest number of transport blocks while the already assigned and does not include inactive transport channels are taken into account.~~

7. (Currently Amended) A terminal of a wireless network comprising a radio network controller,

~~which wherein said terminal is configured for:~~
~~is provided for transmitting transport blocks formed by packet data units of a logic channel over a transport channel to which a transmission time interval is assigned that comprises at least one radio frame and which transport channel is active when the beginning of its transmission time interval and that of a radio frame correspond,~~

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~~is provided for forming~~ at least a transport format combination, which combinations denote the transport blocks to be transmitted over each transport channel,

~~is successively provided forming a reduced number of~~
~~transport format combinations by selecting, for each logic channel,~~
~~to select a number of transport format combinations which permit~~
~~the highest number or more than the highest number of available~~
~~packet data units to be transmitted while stored packet data units~~
~~are taken into account of already considered logic channels which~~
~~are also mapped onto the same transport channel, and~~

~~is provided for selecting from the reduced number of~~
~~transport format combinations the transport format combination that~~
~~contains the lowest number of transport blocks while the already~~
~~assigned and does not include inactive transport channels are taken~~
~~into account.~~

8. (New) The terminal of claim 7, wherein logic channels having different priorities are mapped onto exactly one transport channel and wherein the radio network controller or a terminal is provided for making the selection of a number of transport format

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combinations in the order of priority of the logic channels.

9. (New) The terminal of claim 7, wherein the radio network controller or the terminal is configured for performing a sorting of the logic channels at the beginning of the transmission according to the priorities of the logic channels and, with equal priority of the logic channels, according to the length of a transmission time interval used as the basis, whose duration corresponds at least to one radio frame, and wherein, at the beginning of each radio frame, the radio network controller or the terminal is further configured for making a sorting according to the number of blocks waiting in the buffers of the logic channels without considering the duration of the transmission time interval.

10. (New) The terminal of claim 7, wherein a medium access control (MAC) layer of the radio network controller or of the terminal is configured for selecting a transport format combination.

11. (New) The terminal of claim 10, wherein a radio link

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control layer of the radio network controller or of the terminal is configured for storing packet data units provided for transmission, and the MAC layer is configured for forming a transport block from a packet data unit delivered over a logic channel.

12. (New) A radio network controller as claimed in claim 6, wherein logic channels having different priorities are mapped onto exactly one transport channel, and wherein the radio network controller or one of the plurality of terminals is configured for making the selection of a number of transport format combinations in the order of priority of the logic channels.

13. (New) The radio network controller of claim 6, wherein the radio network controller or one of the plurality of terminals is configured for performing a sorting of the logic channels at the beginning of the transmission according to the priorities of the logic channels and, with equal priority of the logic channels, according to the length of a transmission time interval used as the basis, whose duration corresponds at least to one radio frame, and wherein, at the beginning of each radio frame, the radio network

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controller or the one of the plurality of terminals is configured for making a sorting according to the number of blocks waiting in the buffers of the logic channels without considering the duration of the transmission time interval.

14. (New) The radio network controller of claim 6, wherein a medium access control (MAC) layer of the radio network controller or of the one of the plurality of terminals is configured for selecting a transport format combination.

15. (New) The radio network controller of claim 14, wherein a radio link control layer of the radio network controller or of the one of the plurality of terminals is configured for storing packet data units provided for transmission, and the MAC layer is configured for forming a transport block from a packet data unit delivered over a logic channel.

16. (New) A method of wireless communication between a radio network controller and a terminal, comprising the acts of:

transmitting transport blocks formed by packet data units of a

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logic channel over a transport channel to which a transmission time interval is assigned that comprises at least one radio frame and which transport channel is active when the beginning of its transmission time interval and that of a radio frame correspond;

forming at least a transport format combination, which combinations denote the transport blocks to be transmitted over each transport channel;

forming a reduced number of transport format combinations by selecting, for each logic channel, a number of transport format combinations which permit the highest number or more than the highest number of available packet data units to be transmitted, while taking stored packet data units into account of already considered logic channels which are also mapped onto the same transport channel; and

selecting from the reduced number of transport format combinations a transport format combination that contains the lowest number of transport blocks and does not include inactive transport channels.

17. (New) The method of claim 16, further comprising the acts

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of:

mapping logic channels having different priorities onto exactly one transport channel; and

making the selection of a number of transport format combinations in the order of priority of the logic channels.

18. (New) The method of claim 16, further comprising the acts of:

performing a sorting of the logic channels at the beginning of the transmission according to the priorities of the logic channels and, with equal priority of the logic channels, according to the length of a transmission time interval used as the basis, whose duration corresponds at least to one radio frame; and

at the beginning of each radio frame, making a sorting according to the number of blocks waiting in the buffers of the logic channels without considering the duration of the transmission time interval.

19. (New) The method of claim 16, further comprising the act of selecting a transport format combination by a medium access

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control layer of the radio network controller or of the terminal.

20. (New) The method of claim 19, further comprising the acts of:

storing, by a radio link control layer of the radio network controller or of the terminal, packet data units provided for transmission; and

forming, by the medium access control layer, a transport block from a packet data unit delivered over a logic channel.